



## 1 IDENTIFICATION OF THE PRODUCT AND THE COMPANY OR UNDERTAKING

### Product Identifier

Trade Name \_\_\_\_\_

Application of the Substance or Mixture \_\_\_\_\_

### Details of the Supplier of the Safety Data Sheet (SDS)

#### Designed & Developed by:

Plasma Ruggedized Solutions  
2284 Ringwood Ave, Suite A  
San Jose, CA 95131  
1 (408) 954-8405  
www.plasmarugged.com

Information Department: Product Safety Department: \_\_\_\_\_

Emergency Telephone Number \_\_\_\_\_

## 2 HAZARD IDENTIFICATION

**Potential Physical Effects:** No potential physical effects at ambient environmental conditions.

### Potential Health Effects

Causes eye irritation.

May cause an allergic skin reaction.

Additional hazards, if any, may be found in Section 11.

**Potential Environmental Effects:** No potential environmental effects.

### Hazard Rating System

#### NFPA System

NFPA Ratings (scale 0 - 4)



Health = 2  
Fire = 1  
Reactivity = 0

### HMIS System

HMIS Ratings (scale 0 - 4)



Health = \*2  
Fire = 1  
Reactivity = 0

NFPA special hazards (water reactivity and oxidizing property): None

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization: \_\_\_\_\_

### Composition/Information on Ingredients


Print Date

Revision Date

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Trade Name \_\_\_\_\_


## 4 FIRST AID MEASURES

### Description of First Aid Measures

**General Information:** Ensure medical personnel are aware of exposure and take precautions for their personal protection; see Section 8 for the information of personal protection.

**After Inhalation:** Remove victim from exposure. Supply fresh air; consult doctor in case of complaints.

**After Skin Contact:** Gently wash contaminated skin with water and soap and rinse thoroughly. Seek medical treatment in case of complaints.

**After Eye Contact:** Rinse opened eyes for several minutes under running water. Remove contact lenses if present and easy to do so; continue rinsing. Seek medical treatment in case of complaints.

**After Swallowing:** If victim is unconscious; never give anything by mouth. If victim is conscious; rinse out mouth and give victim plenty of water to drink. Seek medical treatment in case of complaints.

**After Exposure:** Seek medical treatment in case of complaints.

**Information for Doctor** Have chemical containers, labels and/or (M)SDS ready when calling or visiting a medical center.

**Indication of any Immediate Medical Attention and Special Treatment Needed:** After frequent or high intense exposure, the following medical tests are recommended:

- Skin tests
- Reproductive system function tests

**Additional Information:** For additional information, please consult the corresponding first aid measures in the most current version of Emergency Response Guidebook which is produced by the US Department of Transportation.

## 5 FIREFIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Agent(s)

Use fire fighting measures and extinguishing agents that suit the environment.

In case of fire, suitable extinguishing agents are:

Alcohol resistant foam.

Dry chemical or fire-extinguishing powder.

Carbon dioxide (CO<sub>2</sub>).

Water spray or water fog.

#### Unsuitable Extinguishing Agent(s)

Water with full jet

### Firefighting Procedures

Isolate fire and deny unnecessary entry.

Immediately withdraw all personnel from the area in case of rising sound from venting safety device.

Eliminate all ignition sources if safe to do so.

Do not extinguish fire unless flow can be stopped.

Fight fire remotely due to the risk of explosion.



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## Trade Name

Burning liquids may be moved by flushing with water; protect personnel and minimize property damage.  
Fight fire from protected location or safe distance.

## Special Hazards Arising in Fire

In case of fire, followings can be released: Carbon oxides, Nitrogen oxides, Aluminum oxide, Phosphorus oxide

## Advice for Firefighters

If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA fire brigades standard (29 CFR 1910.156).

As with any fire, wear positive-pressure self-contained breathing apparatus and full protective gear that are NIOSH approved.

**Additional Information:** Ensure adequate and functional fire fighting facilities equipped in working area at all times.

## 6 ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.  
Ensure personnel take precautions for their personal protection during clean up; see Section 8 for the specific requirements.

**Environmental Precautions:** No further relevant information.

**Cleaning Up Methods:** Ensure adequate ventilation. Eliminate all ignition sources. Keep unauthorized personnel away.

**For large spills:** Shut off source of leak if safe to do so. Dike and contain. Remove with vacuum trucks or pump to storage/salvage vessels. Absorb residues with liquid-binding materials.

**For small spills:** Use absorbent paper to pick up spills. Ventilate and wash area after clean-up is complete. Collect spills in suitable and properly labeled containers. Do not use solvents unless following safe handling practices and within the recommended exposure guidelines. Dispose contaminated chemicals as waste according to Section 13.

**Additional Information:** No further relevant information.

## 7 HANDLING AND STORAGE

### Handling

#### Precautions for Safe Handling:

Obtain special instruction before use; do not handle until all safety precautions have been read and understood.

Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during handling.

Keep away from incompatible material(s).

Observe all the personal protection requirements in Section 8.

#### Information about Protection Against Explosions and Fires

Will not burn unless preheated.

Keep away from heat, sparks, open flame and other ignition sources during handling.

### Storage

#### Requirements to be Met by Storerooms and Receptacles

Store in a well-ventilated place; provide ventilation for receptacles.

Keep stored in accordance with local, regional, national, and international regulations.

#### Information about Storage in One Common Storage Facility

Store away from incompatible material(s).

Store away from foodstuffs.

Avoid release to the environment.



Trade Name \_\_\_\_\_

**Additional Information:** No further relevant information.

## 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Engineering Measures or Controls

#### Exposure Limit Values that Require Monitoring at the Workplace


### Other Engineering Measures or Controls

Ventilation rates should be matched to conditions.

If applicable, use process enclosure(s), local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

### Personal Protective

#### General Protective and Hygienic Measures

Do not eat, drink or smoke during work.

Keep food, drink or feed away from working area.

Contaminated work clothing is not allowed out of workplace.

Clean hands and exposed skin thoroughly after work and before breaks.

### Personal Protective Equipment (PPE)

#### Breathing Equipment

Caution! Improper use of respirators is dangerous.

In case of brief exposure or low pollution, use a respiratory filter device.

In case of intensive or longer exposure, use a positive-pressure respiratory protective device that is independent of circulating air.

#### Hand Protection - Protective gloves



Selection of glove material should take into consideration the penetration times, rates of diffusion, and the degradation.

Suggested glove type(s)

Nitrile Gloves

Butyl Rubber Gloves

#### Eye Protection - Safety glasses



#### Body Protection: No relevant information.

**Additional Information:** All protective clothing (suits, gloves, footwear, headgear) should be clean, available every day, and put on before work. The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

#### Appearance

Form \_\_\_\_\_

Color | \_\_\_\_\_



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Trade Name \_\_\_\_\_

Odor \_\_\_\_\_

PH-Value \_\_\_\_\_

Change in Condition \_\_\_\_\_

Melting Point \_\_\_\_\_

Boiling Point \_\_\_\_\_

Flash Point \_\_\_\_\_

Explosion Limits \_\_\_\_\_

Lower \_\_\_\_\_

Upper \_\_\_\_\_

Vapor Pressure \_\_\_\_\_

Density at 20 °C (68 °F) \_\_\_\_\_

Solubility in or Miscibility with \_\_\_\_\_

Water \_\_\_\_\_

Viscosity \_\_\_\_\_

Dynamic \_\_\_\_\_

Kinematic \_\_\_\_\_

Additional Information No further relevant information.

## 10 STABILITY AND REACTIVITY

**Physical Hazard(s):** Not a regulated physical hazard.

**Hazardous Reactivity and Chemical Stability:** May polymerize when heated.

**Thermal Decomposition and Conditions to be Avoided:** Keep away from incompatible material(s). Thermally decomposes during fire or high heat; keep away from heat, sparks, open flame and other ignition sources.

**Possibility of Other Hazardous Reaction(s):** May act catalytically with ethylene oxide or vinyl chloride causing irreversible polymerization with considerable heat buildup.

**Incompatible Material(s):** Oxidizing agent, Vinyl acetate, Acids, Nitrates

### Hazardous Decomposition Product(s)

Phosphoric acid

Ammonia (NH<sup>3</sup>) and/or Amines.

Thermally decomposes during fire or very high heat. See Section 5 for fire hazards evolved during thermal decomposition.

**Hazardous Polymerization Product(s):** No relevant information.

**Additional Information:** No further relevant information.

## 11 TOXICOLOGICAL INFORMATION

### Germ Cell Mutagenicity


**Potential Health Effect(s):** Suspected of causing genetic defects.



Trade Name \_\_\_\_\_

**Reproductive Toxicity**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Potential Health Effect(s):** Suspected of damaging fertility or the unborn child.

**Additional Information:** For additional detailed Toxicological Information, please email the Product Safety Department.

**12 ECOLOGICAL INFORMATION**

For detailed Ecological Information, please email the Product Safety Department.

**13 DISPOSAL CONSIDERATIONS**

**Hazardous Waste List**

**Description:** It may be necessary to contain and dispose of the substance/mixture as a hazardous waste.

\_\_\_\_\_  
\_\_\_\_\_

**Waste Treatment Recommendation:** Generation of waste should be avoided or minimized wherever possible. Chemical waste, even small quantities, is neither allowed to be poured down drains, sewage system or waterways; nor disposed with household garbage. Dispose of contents/containers in accordance with local, regional, national, and international regulations.

**14 TRANSPORT INFORMATION**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**15 REGULATORY INFORMATION**

**USA Regulation Lists**

**SARA (Superfund Amendments and Reauthorization Act of 1986)**

**Section 302 (Extremely Hazardous Substances):** None of the ingredients is listed.

**Section 313 (Toxics Release Inventory (TRI) reporting):** None of the ingredients is listed.

**Section 311/312 (Hazardous Chemical Inventory Reporting)**

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____



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Trade Name \_\_\_\_\_

#### Hazard Abbreviations for SARA 311/312

A - Acute Health Hazard  
C - Chronic Health Hazard  
F - Fire Hazard

R - Reactive Hazard  
S - Sudden Release of Pressure Hazard

**TSCA (Toxic Substances Control Act):** All ingredients are listed.

#### Proposition 65

**Chemicals Known to Cause Cancer:** None of the ingredients is listed.

**Chemicals Known to Cause Reproductive Toxicity for Females:** None of the ingredients is listed.

**Chemicals Known to Cause Reproductive Toxicity for Males:** None of the ingredients is listed.

**Chemicals Known to Cause Developmental Toxicity:** None of the ingredients is listed.

#### Carcinogenic Categories

**EPA (Environmental Protection Agency):** None of the ingredients is listed.

**IARC (International Agency for Research on Cancer):** None of the ingredients is listed.

**NTP (National Toxicology Program):** None of the ingredients is listed.

**TLV (Threshold Limit Value Established by ACGIH):** 1333-86-4 Carbon Black (Wetted form)

**NIOSH-Ca (National Institute for Occupational Safety and Health):** None of the ingredients is listed.

**OSHA-Ca (Occupational Safety and Health Administration):** None of the ingredients is listed.

#### International Regulation Lists

**Canadian Domestic Substance Listings:** All ingredients are listed.

**Canadian Ingredient Disclosure list (limit 0.1%)**

**Canadian Ingredient Disclosure list (limit 1%)**

**Chinese Chemical Inventory of Existing Chemical Substances:** All ingredients are listed.

**Japanese Existing and New Chemical Substance List:** All ingredients are listed.

**Korean Existing Chemical Inventory:** All ingredients are listed.

**European Commission (EC) Inventory:** All ingredients are listed.



Trade Name \_\_\_\_\_

**REACH - Substances of Very High Concern (SVHC) List:** None of the ingredients is listed.

## 16 OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department Issuing (M)SDS:** Product Safety Department  
**Contact** \_\_\_\_\_

### Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DOT: US Department of Transportation

ECHA: European Chemicals Agency's Dissemination portal with information on chemical substances registered under REACH

HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System

IARC: International Agency for Research on Cancer developed by United Nations World Health Organisation (WHO)

ICAO-TI: Technical Instructions (TI) by the International Civil Aviation Organization (ICAO)

IMDG: International Maritime Dangerous Goods; the principal international rules for International Carriage of Dangerous Goods by SEA under the Recommendations on the Transport of Dangerous Goods by United Nations (RTDG)

IUCLID: EU REACH International Uniform Chemical Information Database

LC50/LD50: Lethal Concentration/Dose, 50 percent

N/a: Not available or Not applicable

NFPA: US National Fire Protection Association

NIOSH: US National Institute of Occupational Safety and Health

NLM TOXNET: US National Library of Medicine Toxicology Data Network

OSHA: US Occupational Safety and Health Administration

P: Marine Pollutant

RCRA: Resource Conservation and Recovery Act (USA)

REACH: EU Registry, Evaluation and Authorisation of Chemicals

SARA: US Superfund Amendments and Reauthorization Act

TEEL: Temporary Emergency Exposure Limit developed by US Subcommittee on Consequence Assessment and Protective Actions

(SCAPA) of US Department of Energy (DOE)

TSCA: US Toxic Substance Control Act